

**Date:** February 14, 2014

**To:** Thomas J. Bonfield, City Manager

**Through:** W. Bowman Ferguson, Deputy City Manager

**From:** Donald F. Greeley, Director, Water Management

**Subject:** Award of Construction Contract for the North and South Durham Water Reclamation Facilities Chemical Systems and Nutrient Related Improvements, and Selection of a SCADA System Integrator

### **Executive Summary**

Because of its unique geographical location, Durham's water reclamation facilities discharge into two basins – the Neuse River Basin and the Cape Fear River Basin. Both basins have had nutrient reduction strategies imposed for several years; however rules adopted by the Environmental Management Commission (EMC) in recent years require even greater reductions than those imposed by the facilities' National Pollution Elimination Discharge System permits. The Falls Lake Rules were adopted in January 2011 and established milestone nutrient reductions for the North Durham Water Reclamation Facility (WRF) for 2016 (Stage 1) and 2036 (Stage 2). Similarly, the EMC adopted the Jordan Lake Rules in August 2009 requiring reductions in nitrogen and phosphorus discharge from the South Durham WRF by 2016. The deadline for compliance with the Jordan Lake Rule requirements for WRF discharges was subsequently extended to 2018 by Session Law 2011-394 signed into law July 1, 2011.

In order to address and develop plans to meet the requirements of these rules, the Department of Water Management commissioned Water Reclamation Facility Master Plans for the North and South Durham WRFs. The Master Plans, completed in 2012, recommended the construction of carbon-feed systems, sidestream treatment (AnitaMOX®) systems, and several other plant additions. The master plans also recommended rehabilitation of several existing processes and equipment, and upgrades to both plants' Supervisory Control and Data Acquisition (SCADA) systems.

The City opened public bids for the general construction contract on January 16, 2014. Six bids were received, and Crowder Construction Company is recommended for the general construction contract as the lowest cost, responsible, responsive bidder. Prior to the construction bid opening, DWM sought information technology goods and services proposals from SCADA systems integrators and selected CITI, LLC as the entity that submitted the best overall proposal to subcontract the process control, equipment automation, and technology-related services to the general contractor.

### **Recommendation**

The Department of Water Management recommends that the City Council:

1. Authorize the City Manager to execute a general construction contract with Crowder Construction Company for the North and South Durham WRF Chemical Systems and Nutrient Related Improvements project in the total amount of \$13,527,008.96;
2. Authorize establishment of a contingency fund for the contract of \$1,353,000.00;

3. Authorize the City Manager to negotiate change orders for the contract provided that the cost of all change orders does not exceed \$1,353,000.00 and the total project cost does not exceed \$14,880,008.96; and,
4. Designate CITI, LLC as the selected subcontractor for SCADA-related services on the Chemical Systems and Nutrient Related Improvements project.

### **Background**

The City's two water reclamation facilities, North Durham WRF (NDWRF) and South Durham WRF (SDWRF) discharge treated effluent that ultimately reaches Falls Lake and Jordan Lake, respectively. In order to meet nutrient reductions required by the Falls Lake and Jordan Lake Rules, which become effective in 2016 and 2018 respectively (and subsequent phases over the next 20 years), a master plan was prepared for each WRF and completed in 2012. Several new processes are recommended, as well as upgrades to existing processes. This construction project includes the following elements recommended from the 2012 WRF Master Plans:

#### **At the NDWRF:**

1. Aeration Basins No. 1 – No. 6 Modifications
2. New Alum Storage and Feed Facility
3. New Carbon Storage and Feed Facility
4. New Bulk Reuse Fill Station
5. Demolition of six (6) existing structures/facilities

#### **At the SDWRF:**

1. Aeration Basins No. 1 – No. 8 Modifications
2. New Carbon Storage and Feed Facility
3. New Caustic Storage and Feed Facility
4. Alum Storage and Feed Facility Modifications
5. New Tablet Chlorination Facility
6. New Bulk Reuse Fill Station
7. New Sidestream Treatment Facility (AnitaMOX®)

Due to the complex and customer-specific functions of SCADA equipment and programming, DWM solicited information technology goods and services from Process Control Integrators to select an integrator for use as a subcontractor in this construction project.

### **Issues/Analysis**

A Request for Proposals was publicly advertised on November 22, 2013, for a Process Control Integrator and the following two proposals were received on December 30, 2013.

CITI, LLC	\$2,105,983.96
Revere Controls Systems	\$2,951,450.00

Based on qualifications and pricing, DWM selected CITI, LLC as having the best overall proposal. CITI is primarily located in Raleigh and Charlotte, has extensive experience with the programming system selected by the City and provided the lowest cost proposal. Revere is headquartered in Georgia and was significantly more expensive.

For the general construction contract advertised on November 22, 2013, the following six bids were

received on January 16, 2014. The Deductive Alternative chosen involves DWM accepting a manufacturer for variable frequency drives.

Review of the bids deemed all bidders responsive and responsible, and based on the final contract price for the Deductive Alternative chosen, Crowder Construction Co. is recommended.

Bidder	Base Bid	Deduct Alternate	Final Contract Price
<b>Crowder Construction Co.</b>	\$13,568,458.96	\$41,450.00	\$13,527,008.96
<b>English Construction</b>	\$14,602,000.00	No Bid	\$14,602,000.00
<b>Garney Construction</b>	\$13,970,000.00	No Bid	\$13,970,000.00
<b>State Utility Contractors</b>	\$15,886,000.00	\$2,000.00	\$15,884,000.00
<b>T. A. Loving</b>	\$15,996,483.96	No Bid	\$15,996,483.96
<b>Ullman Schutte Constr.</b>	\$14,695,000.00	No Bid	\$14,695,000.00

Crowder Construction Co. was the apparent-low bidder in both their base bid and with the deductive alternate chosen. The total value of the proposed contract with Crowder Construction Co. is \$13,527,008.96. This contract amount is inclusive of \$2,105,983.96 for the SCADA system integrator, CITI, LLC.

#### **Alternatives**

Not executing a contract with Crowder Construction Company – The construction is critical to the City's ability to meet upcoming regulatory requirements. This alternative would jeopardize the City's ability to meet its permitted discharge requirements.

#### **Financial Impacts**

This project is funded in the CIP Wastewater Process Rehab and the Enhanced Nitrogen Removal Capital Improvement Projects. See below for further information.

Capital Project	Account Code	Amount
Enhanced Nitrogen Removal	4100P765-731000-P2132	\$ 2,629,469.00
Enhanced Nitrogen Removal	4100P767-731000-P2132	\$10,016,000.00
Wastewater Process Rehabilitation	4100P007-731000-P251Q	\$ 881,539.96
Wastewater Process Rehabilitation	4100P007-731900-P251Q	\$ 1,353,000.00

#### **SDBE Summary**

The current contract consists of two separate bid phases. The first was a pre selection of the technology service provider. There were no SDBE goals for the technology service provider bid as described in section a) below. The selected provider will be used by the General Contractor for the work. The General Contract goals are described in section b) below.

#### **a) SDBE Summary – Regarding System Integration proposals**

##### **SDBE REQUIREMENTS**

No M/SDBE or W/SDBE goals were set. This is a highly-specialized technical area and there is a very limited number of qualified providers for these services.

The Equal Opportunity/Equity Assurance Department reviewed the proposal submitted by CITI, LLC of Cary, North Carolina and have determined that they are in compliance with the Ordinance to Promote Equal Business Opportunities in City Contracting.

## **WORKFORCE STATISTICS**

Workforce statistics for CITI, LLC are as follows:

Total Workforce	32	
Total Females	4	(13%)
Total Males	28	(87%)
Black Males	1	(3%)
White Males	14	(44%)
Other Males	13	(41%)
Black Females	0	(0%)
White Females	3	(9%)
Other Females	1	(3%)

### **b) SDBE Summary –General Construction Bid**

The Equal Opportunity/Equity Assurance Department reviewed the bid submitted by Crowder Construction Co., Apex, NC and determined that they are in compliance with the Ordinance to Promote Equal Business Opportunities in City contracting. Crowder has subcontracted with Covenant Trucking as noted below.

## **SDBE REQUIREMENTS**

Firm	ID	City/State	Amount	% of Contract
Covenant Trucking	MSDBE	Durham, NC	\$23,000.00	0.17%

The goals for this project were: 3% M/SDBE and 1 % W/SDBE. While Crowder Construction did not meet the goals, it was determined by Equal Opportunity/Equity Assurance staff that their good faith effort to meet the goals for the project was sufficient. The efforts undertaken by Crowder to achieve compliance included contacting 109 firms in the SDBE database, however only 14 responded. Of those that responded to Crowder's bid request, only four submitted quotes and one of the four submitted their response too late for the bid. Crowder made timely contacts and sufficient follow-up. Staff reviewed their bid requests and found them to be sufficient in terms of description of scopes of work, contact information and where plans and specifications could be viewed. Furthermore, Crowder advertised through media that typically targets minority and women contractors. Workforce statistics for Crowder Construction Co., Apex, NC are as follows:

Total Workforce	333	
Total Females	19	5%
Total Males	314	95%
Black Males	29	9%
White Males	204	61%

Other Males	81	24%
Black Females	2	1%
White Females	15	4%
Other Females	2	1%